TABLE 4

CHIMNEY DRAFT

(Lange)

$$\frac{BG(1+at_O)}{\frac{700-f_n}{700+t_n}}$$

$tgi-\frac{d_u-do}{}$ 0.008 to 0.010,

in which F_0 = area of bore of chimney at top in square meters;
B — kilograms of coal burned per hour;
G = kilograms of flue gases per kilogram of coal;
a = 1-^273 = 0.00367;
to = temperature of gases at base of chimney;
7 = 1.293 = weight of a cubic meter of air at 0° and 760 mm;
5=ratio between the weight of flue gases and air;
do = diameter of bore of chimney at top;
t? =3.1416 for a circle;
3.3137 for an octagon;
4.00 for a square;
Z = length of flue in meters;
a=flue coefficient 0.03 to 0.14 (usually 0.04);
H_r—*height of chimney above grates in meters;*
z=mm of water or kilograms per square meter;
71 = weight of flue gases per cubic meter at 0° and 760 mm;
d_u = diameter of bore of chimney at base in meters
t_m—*average temperature of flue gases;*
p= kilo grams of coal burned per second;
Q=waste gases per kilogram of coal, cubic meters;
u_n=velocity of gas flow, meters per second (from 3 to 15).